Regional Integrated Sciences and Assessments (RISA)

FY 2009 Information Sheet

Program methodology and objectives

The Regional Integrated Sciences and Assessments (RISA) program supports integrated, place-based research across a range of social, natural, and physical science disciplines to expand decision-makers' options in the face of climate change and variability at the regional level. It does this in a manner that is cognizant of the context within which decision-makers function and the constraints they face in managing their climate-sensitive resources.

RISA teams are comprised of researchers from the physical, natural, engineering and social sciences who work together and partner with stakeholders in a region to determine how climate impacts key resources and how climate information could aid in decision making and planning for those stakeholders. This effort often includes analyses of adaptation options in the face of a varying and changing climate.

Example topics covered by the RISA program include:

—Agriculture

—Wild land Fire

—Water Resources

—Drought Planning

—Fisheries

—Public Health

—Coastal Climate Impacts

—Transportation

Topics covered by individual RISAs depend on regional interests.

Overview

As defined here, assessments raise questions and express judgments on the reliability of knowledge about linkages and projections at the climate-environment-society interface and on the robustness of the data. For example, what are the "critical" issues and how are they identified? What is known and what do we need to know? How do these relationships change over time? Do we know them well enough for effective decision-making? How can social and economic benefits be maximized? This problem-focused orientation has the added impetus of identifying alternative decision pathways and the consequences of those decisions.

New knowledge, new problems and opportunities continuously arise as events unfold. Integrated scientific assessments constitute the sum of efforts to (1) characterize the state of knowledge of climate variations and changes at appropriate scales of interest, (2) identify knowledge gaps and linkages in selected climate-environment-society interactions, and (3) provide an informed basis for a) responding to climate-related risks, and for b) establishing priorities in basic research investments to meet these needs. To achieve the goals of meeting these evolving needs, assessments must be forward looking and anticipatory, and broad enough to evaluate the potential for scientific surprises.

The "regional scale" offers a useful organizational unit on which to coordinate and evaluate research cognizant of socio-economic needs and geophysical and jurisdictional boundaries. Assessment of critical climate-sensitive issues, in this setting, is the iterative process of integrating interdisciplinary knowledge and experience about risks and vulnerabilities in a region commensurate with the design and support of effective responses.

The Integrated Sciences component informs the assessment function by focusing ongoing research on (1) linkages between critical components of physical and natural systems (e.g. climate-fisheries interactions), (2) linkages between climate and social or economic activities (e.g. climate and energy production) and relevant variations and changes in these systems, and (3) linkages between this integrated knowledge and decision processes and/or natural resources management objectives. RISA projects do not advocate one set of policy options over another but seek to evaluate the implications of different choices under varying and changing climate conditions.

RISA teams conduct research, assessments (e.g., white papers, newsletters and/or seasonal outlooks) and stakeholder interactions (e.g., workshops, focus groups, extension activities) and therefore act as a bridge for bringing climate impacts information to decision makers.

FY 2009 Solicitation

In FY 2009, the RISA Program is soliciting proposals for one distinct region: the Pacific Islands. Proposals are solicited to support one RISA team project in the Pacific Islands region. The effort must create partnerships among institutions focused on this region, which must include the state of Hawaii, and build on existing efforts within the region to study the impacts of climate and expand integrated social, physical, and natural science research in support of climate services. The project can be up to 5 years in duration.

The RISA Program seeks to: (1) foster interdisciplinary research and assessment synthesis; (2) improve our understanding of and bridging the gap among climatic, environmental and societal interactions on different temporal and spatial scales; and (3) contribute to regional decision support and climate information service. A successful RISA Program requires innovative and embedded long-term partnerships among a spectrum of interested parties including Federal, State, Native, regional, local and private

entities. The proposal must focus on cross boundary issues (e.g., across islands in the Pacific) and **not just on one island or state**.

Depending on Congressional appropriations, NOAA plans to have funding on the order of up to $150-300K per year available for this RISA. Part of that funding may come out of a Coping with Drought initiative. Thus, the proposal should speak, at least in part, to issues of the socioeconomic impacts of and planning for drought in the Pacific Islands region. The proposal should also speak to connections with the emerging National Integrated Drought Information System (NIDIS) being developed by NOAA. Information about NIDIS can be found at http://www.drought.gov/portal/server.pt. The NIDIS program is particularly interested in this RISA engaging the preparedness communities (e.g., watershed, state or county entities, regional entites, federal agencies) in developing drought-related indicators and risk management triggers for preparedness and response.

Proposed projects should build on progress already achieved by integrated climate-society research and assessments projects in the region in terms of working with stakeholders and advancing regional climate impacts science.

The proposal should address how the team intends to include social and physical science research on the impacts of climate variability and change on the social, ecological, and/or economic systems of the region. Research on evaluating the impact of the RISA on regional and local stakeholders, policy and planning processes, and resource management as the RISA evolves is also important.

Place-based research is a key component of the RISA research methodology. NOAA encourages prospective proposals to include partners from the region. Applicants should also show how your research could potentially contribute to emerging NOAA Climate Services in the region. (See sources listed under background information above.) In addition to the National Weather Service (NWS) offices and NOAA's Climate Prediction Center, NOAA also invests in and collaborates with the Regional Climate Centers (RCCs). Proposed linkages to NWS, Regional Climate Centers (RCCs), state climatologists and/or other climate information providers for the region should be addressed in the proposal. Research teams need not be from only one institution. Applicants are encouraged to plan for multi-institutional partnerships, where appropriate, over the five-year period. Partners could include other universities, NGOs, U.S. federal agencies, state and local agencies (including state climatologists), native or tribal organizations, and the private sector.

By supporting a RISA and leveraging activities from the Regional Climate Centers and NWS regional climate services program, NOAA hopes to accelerate decision support research and transition experimental tools into resource management and public and private sector planning. NOAA's Transition of Research Applications to Climate Services (TRACS) Program (http://www.cpo.noaa.gov/cpo_pa/nctp/) is one program designed to foster this transition.

Integration and management of the team and its various components are critical to the success of a RISA. A core office with a part-time or full-time program manager or a strong executive committee is advised. The core office serves an important role in developing mechanisms for and ensuring the integration of research elements and ensuring the role of stakeholder activities in influencing the direction of the research. The latter is of paramount importance for ensuring a successful RISA. Plans for engaging the stakeholder community should be clearly spelled out, and the core office could play a significant role here as well. A component of flexible funding could be beneficial so that the RISA can respond to stakeholder needs and undertake short-term (1-2 year) research and outreach activities in response to those needs as the RISA evolves during the five-year period.

RISAs are implemented as cooperative agreements with NOAA and thus some amount of regular interaction between the RISA team and NOAA is expected. NOAA is particularly interested in what the NOAA Climate Program as a whole can learn from the RISAs in terms of stakeholder feedback to help guide observations and research planning, NOAA Climate Prediction Center products, and NOAA Climate Services as a whole.

Process

NOAA will conduct a peer review process to select the best, integrated science, assessment, and outreach effort for the region. Site visits may be included as part of the peer review process. The proposal being offered funding from the fiscal year 2009 review process will be announced as soon as it has been vetted through the grant awarding process.

Discussion questions that often arise during the proposal review panel process have included following:

1. Is there a plan for engaging stakeholders and addressing their needs?
2. Will the science be influenced by stakeholder engagement? Is there a plan for this? Does the team have experience in engaging stakeholders in a collaborative fashion?
3. Will the research address important resource management and public policy issues?
4. How effectively will the proposed effort address climate impacts science for the region? Does the team have the expertise needed? Have they advanced this area in the past?
5. For instance, does the team have the necessary social (e.g., economic, political, anthropological, etc.) and physical (e.g., atmospheric, oceanographic, etc.) sciences expertise?
6. In particular, is the team proposing to address the socio-economic dimensions of climate and drought impacts in the region? Do they have the expertise to address these issues?

7. Does the proposal contain a plan for integration of the science? Does the team have experience in integrated research necessary for addressing regional climate impacts?
8. Is there a plan for managing the integration of the team?
9. Will the team link with broader climate services efforts in the region, such as National Weather Service climate services, Regional Climate Center, state climatologists and other agency efforts (e.g., USDA, Department of Interior, etc.)?
10. Does the team have a plan for assessing their performance (e.g., standards measures, internal reviews) and expressing/addressing successes and challenges?

Background Information on the current RISA program and teams:

1. General information on the RISA program and links to current RISA team web sites can be found on the main website for this program. (http://www.climate.noaa.gov/cpo_pa/risa/)

2. Other relevant resources:

1. Regional Climate Centers: http://www.ncdc.noaa.gov/oa/climate/regionalclimatecenters.html

2. NWS Climate Services: http://www.nws.noaa.gov/organization.php#hq;

3. State Climatologists http://www.ncdc.noaa.gov/oa/climate/aasc.html

4. U.S. Climate Change Science Program (CCSP) Strategic Plan (http://www.climatescience.gov/Library/stratplan2003/final/default.htm)

5. Sector Applications Research Program (SARP) (http://www.climate.noaa.gov/cpo_pa/sarp/)

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